

011539



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Canada

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POSITIVE RECALL

EFFECTIVE 19/7/23 AUTH

RELEASED DATE

Requires DS19346

Rev. 2 from

Eng. See deviation.



D206-667-203

Job Sheet 197724

DAS
55
9-89

Part No: D206-667-203

Job Qty: 1 pcs

Part Name: Aft Crosstube - High 206L / L1 / L3 / L4



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/15/19

Job Tracking No:

Due Date: 8/16/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG D206-667-243 REV.D/ IIN-D206-667 REV.D IPP Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM IPP Rev:G 08-06-03 update as per DS19415 (ECN1198) DD verified by:ec IPP Rev:H 08-07-18 remove thread masking in step 12 DD verified by:EC IPP Rev:I 08-12-15 add magnobond DD verified by:EC IPP Rev J 09.01.06 ECN 08-552 EC verified by:DD IPP REV:K 11.08.05 PER ECN 11-615 DD VERF:EC IPP REV:L 18.09.13 AS PER DWG REV.D DD VERF:JF

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard	Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs	
110	Crosstubes - Bend - 1	1 pcs	8/16/19	0.50	1.54	Crosstubes - Bend	BB 7/14/2019
120	QC 15	1 pcs	8/16/19	0.00	0.00	QC 15 - 12	TV
						QC 15 - 3	
						QC 15 - 47	
						QC 15 - 49	
						QC 15 - 58	
						QC 15 - 9	
						QC 15 - 68	
130	Crosstubes - 2 - B4B	1 pcs	8/16/19	0.00	1.00	Crosstubes - 1 - B4B	GP 19-08-08
						Crosstubes - 2 - B4B	
						Crosstubes - 3 - B4B	
						Crosstubes - 4 - B4B	
135	Crosstubes - 3 - B4B	1 pcs	8/16/19	0.00	0.25	Crosstubes - 1 - B4B	GP 19-08-08
						Crosstubes - 2 - B4B	
						Crosstubes - 3 - B4B	
						Crosstubes - 4 - B4B	
140	QC 5	1 pcs	8/16/19	0.00	0.00	QC 5 - 10	
						QC 5 - 12	
						QC 5 - 17	
						QC 5 - 18	
						QC 5 - 19	
06-667-203/197724/5198486							
						QC 5 - 49	
						QC 5 - 51	
						QC 5 - 58	

D206-667-203/197724/5198486

142 QC 7	1 pcs	8/16/19	0.00 0.00	QC 5 - 68	AUG 12 2019	DAS 68 9-89
				QC 5 - 9		
				QC 5 - 50		
				QC 5 - 30		
				QC 5 - 40		
				QC 5 - 61		
				QC 5 - 81		
				QC 7 - 10		
				QC 7 - 13		
				QC 7 - 14		
				QC 7 - 15		
				QC 7 - 17		
				QC 7 - 18		
				QC 7 - 19		
				QC 7 - 2		
				QC 7 - 28		
				QC 7 - 3		
				QC 7 - 30		
				QC 7 - 34		
				QC 7 - 36		
				QC 7 - 37		
				QC 7 - 41		
				QC 7 - 47		
				QC 7 - 48		
				QC 7 - 51		
				QC 7 - 58		
				QC 7 - 59		
				QC 7 - 60		
				QC 7 - 9		
				QC 7 - 68	AUG 12 2019	DAS 68 9-89
				QC 7 - 50		
				QC 7 - 67		
				QC 7 - 40		
				QC 7 - 24		
				QC 7 - 43		
				QC 7 - 61		
				QC 7 - 81		
170 Outsource - 2 - NDT per QSI038	1 pcs	8/16/19		SKY002-VC		2019-08-13
180 Packaging 2-1 - Receive - B4B	1 pcs	8/16/19	0.00 0.00	Packaging 2 - 1 - B4B		
				Packaging 2 - 2 - B4B		
				Packaging 2 - 3 - B4B		
				Packaging 2 - 5 - B4B		
				Packaging 2 - 4 - B4B		
				Packaging 2 - 6 - B4B		
				Packaging 2 - 7 - B4B		
				Packaging 2 - 8 - B4B		
				Packaging 2 - 9 - B4B		
				Packaging 2 - 10 - B4B		
				Packaging 2 - 11 - B4B		
				Packaging 2 - 12 - B4B		
				Packaging 2 - 13 - B4B		
				Packaging 2 - 14 - B4B		
				Packaging 2 - 15 - B4B		
				Packaging 2 - 16 - B4B		
				Packaging 2 - 17 - B4B		
				Packaging 2 - 18 - B4B		
				Packaging 2 - 19 - B4B		
				Packaging 2 - 20 - B4B		

				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
190 QC 5	1 pcs	8/16/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	AUG 14 2019
				QC 5 - 61	
				QC 5 - 81	
200 Spray Paint - 2 - B4B	1 pcs	8/16/19	0.00 0.25	Spray Paint - 1 - B4B	• AS 19-8-15
				Spray Paint - 2 - B4B	
				Spray Paint - 3 - B4B	
				Spray Paint - 4 - B4B	
210 QC 14	1 pcs	8/16/19	0.00 0.00	QC 14 - 15	
				QC 14 - 2	
				QC 14 - 34	
				QC 14 - 41	
				QC 14 - 51	
				QC 14 - 58	
				QC 14 - 59	
				QC 14 - 9	
				QC 14 - 68	AUG 16 2019
				QC 14 - 40	
				QC 14 - 19	
				QC 14 - 43	
				QC 14 - 24	
				QC 14 - 61	
				QC 14 - 81	
220 Crosstubes - 4 - B4B	1 pcs	8/16/19	0.00 1.33	Crosstubes - 1 - B4B	
				Crosstubes - 2 - B4B	
				Crosstubes - 3 - B4B	
				Crosstubes - 4 - B4B	• AS 19-8-17
240 QC 5	1 pcs	8/16/19	0.00 0.00	QC 5 - 10	
				Plex 7/15/19 3:49 PM Dart.lajeunesse.marie	

				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	AUG 20 2019
				QC 5 - 9	DAS 68
				QC 5 - 50	9-89
				QC 5 - 30	
				QC 5 - 40	
				QC 5 - 61	
				QC 5 - 81	
250	Packaging 1-1 - Pick Kit - B4B	1 pcs	8/16/19	0.00 0.00	Packaging 1 - 1 - B4B
					Packaging 1 - 2 - B4B
					Packaging 1 - 3 - B4B
					Packaging 1 - 4 - B4B
					Packaging 1 - 5 - B4B
					Packaging 1 - 6 - B4B
					Packaging 1 - 7 - B4B
					Packaging 1 - 8 - B4B
					Packaging 1 - 9 - B4B
					Packaging 1 - 10 - B4B
					Packaging 1 - 11 - B4B
					Packaging 1 - 12 - B4B
					Packaging 1 - 13 - B4B
					Packaging 1 - 14 - B4B
					Packaging 1 - 15 - B4B
					Packaging 1 - 16 - B4B
					Packaging 1 - 17 - B4B
					Packaging 1 - 18 - B4B
					Packaging 1 - 19 - B4B
					Packaging 1 - 20 - B4B
					Packaging 1 - 21 - B4B
					Packaging 1 - 22 - B4B
					Packaging 1 - 23 - B4B
					Packaging 1 - 24 - B4B
					Packaging 1 - 25 - B4B
					Packaging 1 - 26 - B4B
					Packaging 1 - 27 - B4B
					Packaging 1 - 28 - B4B
					Packaging 1 - 29 - B4B
					Packaging 1 - 30 - B4B
					Packaging 1 - 31 - B4B
					Packaging 1 - 32 - B4B
					Packaging 1 - 33 - B4B
					Packaging 1 - 34 - B4B
					Packaging 1 - 35 - B4B
					Packaging 1 - 36 - B4B
260	QC 4	1 pcs	8/16/19	0.00 0.00	QC 4 - 28
					QC 4 - 58
					QC 4 - 69
					QC 4 - 9
					QC 4 - 46
					Plex 7/15/19 3:49 PM Dart.lajeunesse.marie

270 Packaging 3-1 - Stock - B4B	1 pcs	8/16/19	0.00 0.00	QC 4 - 68	
				QC 4 - 72	
				QC 4 - 74	
				QC 4 - 75	
				Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	AUG 26 2019
275 DC - 1 - B4B	1 pcs	8/16/19	0.00 0.00	DC - 1 - B4B	
				DC - 2 - B4B	
280 QC 21 - FG	1 pcs	8/16/19	0.00 0.00	QC 21 - FG - 21	
				QC 21 - FG - 70	AUG 26 2019
				QC 21 - SA - 53	

Part Op 110 - (CNC Alpha 160 Bender), Bend tube as per Dwg D206-667-243 using CNC bender program 206L-AF
 Descriptions: 120 - (QC15- Crosstube Dimensional Check)

130 - ***** ENSURE PROPER JIG POSITIONING BEFORE DRILLING***** , VERIFIED BY: ***** 1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill all (3) top holes. Holes facing inboard. Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 2- Drill fwd rivet holes using drill Jig DT8787 fwd as per Dwg D206-667-243. Note: FWD side has 3X top holes facing inboard. 3- C'sink holes as per dwg D206-667-243. Allow rivet to sit below surface to compensate for paint. 4- Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins. Drill ONLY 2 top holes ONLY plug most bottom hole to prevent accidental drilling. Drill holes and ream using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill only the top (2) holes. Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 5-Drill aft rivet holes using drill Jig DT8787 aft as per Dwg D206-667-243. Drill only the top (2) holes. 6- C'sink holes as per dwg D206-667-243. Allow rivet to sit below surface to compensate for paint. 7- Scribe tube to identify on the inner chamfer in the cuff D# and B# 8-*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***Debur & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-243
 135 - (Crosstubes Chemical Conversion), ***IMMEDIATELY AFTER GRINDING***
 140 - (QC5- Inspect part completeness to step on W/O), *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
 142 - (QC7-Inspect Chemical Conversion Coat)

- 170 - (Outsource process - NDT per QSI038 4.1), *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Issue P/O: _____ LPI as per ASTM 1417
- 180 - (Receive & Inspect for Damage & Mat'l Certs), *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
- 190 - (QC5- Inspect part completeness to step on W/O), *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Ensure results are as per Dwg D206-667-243
- 200 - (Spray Paint / NDT Room), *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** 2-Paint outside crosstube with White Imron as per QSI 005 4.2 PRIME: **PAINT 5189223 Paint 5204428**
- 210 - (QC14- Inspect Spray Paint), Wrap in plastic bag to protect from scratches
- 220 - INSTALL GROUNDING CLAMP AND SEAL WITH SIKAFLEX AS PER DWG 2-Install supports with Proseal 890 per D206-667-243 and QSI 015 3-Install supports clamps Using D19565 as per Dwg D206-667-243 ,Torque to 80-100 IN-LBS. **3170610 exp 19/10**
- 240 - (QC5- Inspect part completeness to step on W/O), ***RE-CHECK TORQUE ON CLAMP AFTER PROSEAL HAS CURED FOR 72HOURS AS PER DWG.***
- 260 - (QC4- 100% Inspect kits for completeness), ***VERIFY BY _____ BATCH # TO MATCH W/O
- 270 - (Identify as per dwg & Stock Location: _____), Identify and pack for shipping as per PPP D206-667-203
- 275 - Photocopy bluefile and create labels as per PPP D206-667-203 CHG004
- 280 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D206-667-203TRN	Crosstube Turning Detail	1 pcs (1 ea)	110-Crosstubes - Bend - 1	F144582
D2873-043	Nut Plate Assembly	2 pcs (2 ea)	220-Crosstubes - 4 - B4B	
D2873-045	Nut Plate Assembly	2 pcs (2 ea)	220-Crosstubes - 4 - B4B	
D2892-1	Support	2 pcs (2 ea)	220-Crosstubes - 4 - B4B	
D3595-063-450	Rubber Cushion 0.63" Wide X 4.50" Long	4 pcs (4 ea)	220-Crosstubes - 4 - B4B	
MS20601-AD4W10	Rivet	14 Ea (14 ea)	220-Crosstubes - 4 - B4B	
MS21920-22	Clamp	4 Ea (4 ea)	220-Crosstubes - 4 - B4B	
AN5-10A	Bolt	10 Ea (10 ea)	250-Packaging 1-1 - Pick Kit - B4B	5093027
AN5-32A	Bolt	4 Ea (4 ea)	250-Packaging 1-1 - Pick Kit - B4B	5119858
AN5-34A	Bolt	4 Ea (4 ea)	250-Packaging 1-1 - Pick Kit - B4B	509410
MS21042L5	Nut	4 Ea (4 ea)	250-Packaging 1-1 - Pick Kit - B4B	5160302
NAS1149D0563J	Washer	18 Ea (18 ea)	250-Packaging 1-1 - Pick Kit - B4B	5152640

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Crosstubes - Bend - 1	D206-667-203TRN	1	4	0
220-Crosstubes - 4 - B4B	D2873-043 5186472	2	39	0
	D2873-045 5186342	2	32	0
	D2892-1 5190259	2	8	0
	D3595-063-450 5196511	4	63	0
	MS20601-AD4W10 5133678	14	74	0
	MS21920-22 5171289	4	75	0
250-Packaging 1-1 - Pick Kit - B4B	AN5-10A	10	82	0
	AN5-32A	4	277	0
	AN5-34A	4	41	0
	MS21042L5	4	401	0
	NAS1149D0563J	18	2,158	0

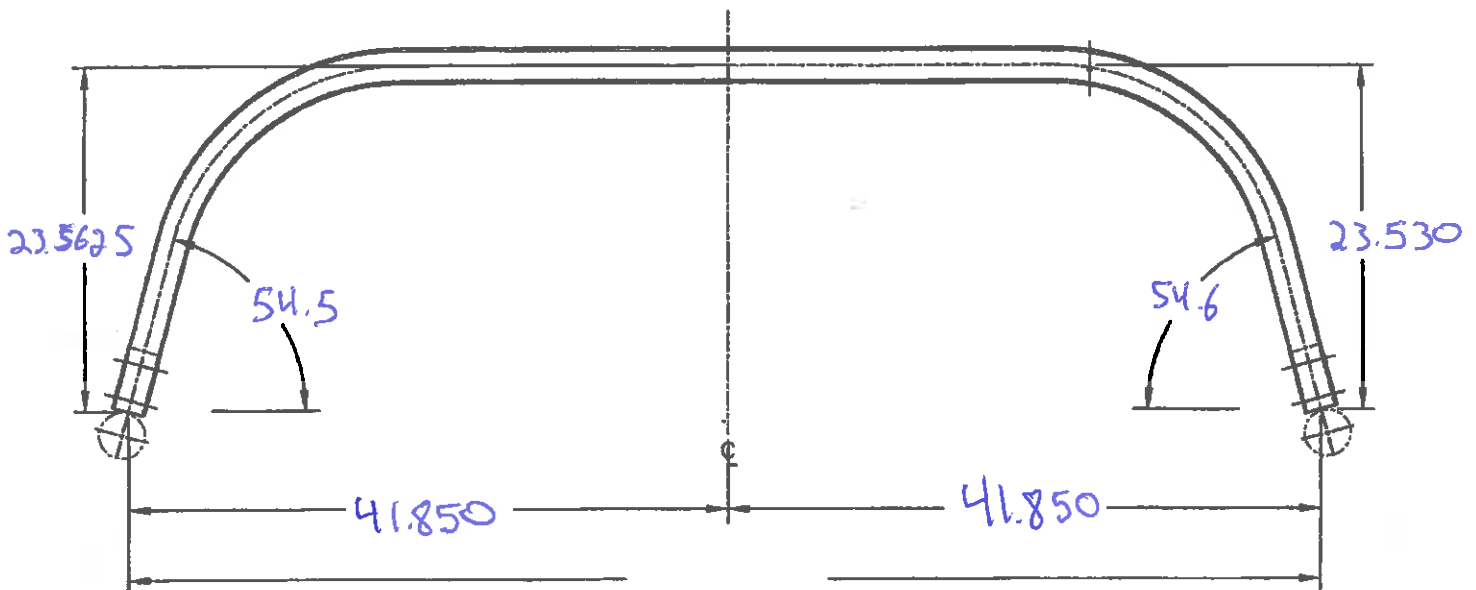
Part Specifications

Specifications could not be found.

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DART AEROSPACE LTD		Work Order:	
Description: Crosstube High Aft (206L)		Part Number:	D206-667-203
Inspection Dwg: D206-667-243 Rev: C		Page 1 of 1	

Required Dimension	Min	Max
Height	23.39	23.65
1/2 Span	41.79	42.05
Angle	54	56
Total Span	83.58	84.1
Bending Passes	8	--
Crushing	--	6%



2.112
2.306

	Side A	Side B
Bending Passes	8	
Crushing	4.4%	4.2%
Comments		

2.113
2.299

QC15 Inspection	JW
Date	19-07-18

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	09.11.17	Dwg Rev updated	KJ	
C	09.12.14	Dimensions update per Dwg Rev C	KJ	
D	12.04.16	Added bending, crushing dimensions	KJ	

Item	Qty	Part Number	Description
	-243		
1	X	D208-667-243	CROSSTUBE ASSEMBLY (208L HIGH AFT)
2	1	D8004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20801ADAW10	RIVET (OR NAS9302B-4-10)
9	AR	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6004-115
FINISHED LENGTH = 104.9130.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D208-667-243" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) TO INSTALL D2892-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT), APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

RELEASED
2018 SEP 06
Z-N119-747

D	REVISE SHEET 2 ASSEMBLY DETAIL HOLE PATTERN PER CAR18-221. UPDATE PARTS LIST AND GENERAL NOTES 12 & 15 TO INCORPORATE DED C-1.	JMH	18.05.01
C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2892-1 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN A-3, C5-3, D5-3); RELOCATED FLAG #8 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET A.	RF	08.11.08
B	ADD HOLES AND NUT PLATES FOR COMPATIBILITY WITH BHT1AA SKIDTUBES	PH	05.07.28
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	JMH		
DRAWN	JMH		
CHECKED	JMH		
MFG. APPR.	D208-667-243		
APPROVED			
DE APPR.			
DATE	18.05.01		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	REV. D
D208-667-243	SHEET 1 OF 4
TITLE	SCALE
CROSSTUBE ASSY (208L HIGH AFT)	NTS
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Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only



Job: _____ Part No. _____		DISPOSITION ☒ Rework ☐ Scrap ☐ Use-as-is		DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☒ Eng. (Non-AW) ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐		Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																													
Date: _____	Sequence #: _____	QTY Affected: _____		MRB (QSI042) INSP 12 of 12 12/13		Completed By: _____ 19-08-14																													
Description Work Order Deviation Qty (1) hole in cuff that is not a thru hole was drilled thru. <u>Supports are shifted by 0.04"</u>				Disposition Drill opposite cuff # to match. Kit must include DS79346 Rev. S from Engineering. <u>Support location acceptable</u> DS79346 Rev. S sum to packaging 19/5/14																															
Root Cause ☒ Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors				FAULT CATEGORY <table border="1"> <tr> <td>Pressure/Forced</td> <td>Contamination</td> <td>Power Loss/Surge</td> <td>Positioned Wrong</td> </tr> <tr> <td>Bending</td> <td>Misaligned/off center</td> <td>Folio/Program</td> <td>Outside Tolerance</td> </tr> <tr> <td>Crushing</td> <td>BOM/Route</td> <td>Grain Direction</td> <td>Drawing</td> </tr> <tr> <td>Cracks</td> <td>Broken/Damage/Defect</td> <td>Weld</td> <td>Finish</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave/Twist</td> <td>Incomplete/Unclear Instructions</td> <td>Wrong Stock Pulled</td> <td>Part Lost/Missing</td> </tr> <tr> <td>Marks/Chatter</td> <td>Drill Holes</td> <td>Out of Sequence</td> <td>Misread</td> </tr> <tr> <td>Mislabeled</td> <td>Fit/Function</td> <td>Off-set/Set-up</td> <td></td> </tr> </table>				Pressure/Forced	Contamination	Power Loss/Surge	Positioned Wrong	Bending	Misaligned/off center	Folio/Program	Outside Tolerance	Crushing	BOM/Route	Grain Direction	Drawing	Cracks	Broken/Damage/Defect	Weld	Finish	Crimp/Kink/Ripple/Wave/Twist	Incomplete/Unclear Instructions	Wrong Stock Pulled	Part Lost/Missing	Marks/Chatter	Drill Holes	Out of Sequence	Misread	Mislabeled	Fit/Function	Off-set/Set-up	
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Mislabeled	Fit/Function	Off-set/Set-up																																	
Other/Details: _____																																			



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB044239



Supplier: SKY002-VC
Skyservice
6120 Midfield Road
Mississauga
ON
L5P 1B1 Canada
Phone: 905-678-5636
Fax: 905-678-5841

Attention: Jenne, Heather

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB044239
PO Date: 8/12/19
Due Date: 8/13/19
Purchase Order Revision:
Revision Date:
Ship-To Contact: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	197937	D119-796-251	Aft Crosstube Installation With Step (No Hardware) : TC STC SH14-45-Issue 1, FAA STC SR03504NY 15/01/28, EASA STC 10052022 Revision 1 15/02/13, DGCA INDIA LoA 07-09/2011-AED (Part) 15/07/16, BRAZIL STC 2015S07-16 15/07/30, CAAP PHILIPPINES LoA 16/05/11, CHINA VSTC0757 16/07/22, RUSSIA STC CT316-A119 16/08/11, DGAC INDONESIA STC SR025 18/02/19 ISSUE P/O: *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** C OF C IS REQUIRED	Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	197938			Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							2	0	2		\$239.00



Dart Aerospace Ltd.
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Hawkesbury, ON
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PURCHASE ORDER

POHB044239



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
2	197723	D206-667-203	Aft Crosstube - High 206L / L1 / L3 / L4 : TC STC SH01-5 Issue 3, FAA STC SR01304NY 05/12/15, JCAB JAPAN STC-32-OSA 02/02/28, EASA STC EASA.IM.R.S.01179 06/07/03, BRAZIL 2009S08-16 09/08/25, BRAZIL 2009S08-17 09/08/25 (Outsource process - NDT per QSI038 4.1), *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Issue P/O: _____ LPI as per ASTM 1417	Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	197724			Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							2	0	2		\$239.00
3	197725	D206-667-201	Aft Crosstube - High 206 A/B : TC STC SH01-5 Issue 3, FAA STC SR01304NY 05/12/15, JCAB JAPAN STC-32-OSA 02/02/28, EASA STC EASA.IM.R.S.01179 06/07/03, BRAZIL 2009S08-16 09/08/25, BRAZIL 2009S08-17 09/08/25 (Outsource process - NDT per QSI038 4.1), *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***	Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	197726			Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							2	0	2		\$239.00
4	196763	D130-1048-041	H130/EC130 - Replacement Skidtube - Standard - LH : TC STC SH19-4 Issue 1, FAA STC SR04320NY dated 19/03/26 (Outsource process - NDT per QSI038 4.1), ISSUE P/O: _____ Liquid Penetrant Inspection as per QSI 038 LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order NDT C OF C IS REQUIRED	Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	196762			Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							2	0	2		\$239.00

DAS
40
9-89



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB044239



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
5	196766	D130-1048-042	H130/EC130 - Replacement Skidtube - Standard - RH : TC STC SH19-4 Issue 1, FAA STC SR04320NY dated 19/03/26 (Outsource process - NDT per QSI038 4.1), ISSUE P/O: Liquid Penetrant Inspection as per QSI 038 LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order NDT C OF C IS REQUIRED	Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
	196767			Firmed	-	8/13/19	1 pcs	0 pcs	1 pcs	\$119.50/pcs	\$119.50
Sub Total:							2	0	2		\$239.00
Grand Total:										\$1,195.00	

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 8/13/19 1:55 PM Dart.Guerin.Kimberley

**skyservice****Work Order Traveler**
Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

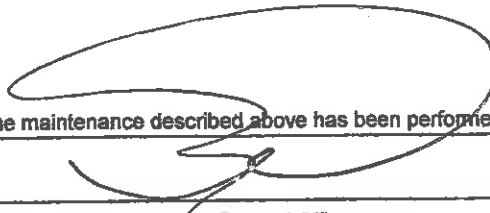
WO #: MWO41392	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: POHB044239 ✓
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:**CARRY OUT NDT ON:**

- ✓ 2 REPLACEMENT SKIDTUBE-STANDARD-LH , P/N: D130-1048-041 , J/S: 196762 , 196763
- ✓ 2 REPLACEMENT SKIDTUBE-STANDARD-RH , P/N: D130-1048-042 , J/S: 196766 , 196767
- ✓ 2 AFT CROSSTUBES , P/N D119-796-251 , J/S: 197937 , 197938
- ✓ 2 AFT CROSSTUBES , P/N: D206-667-203 , J/S: 197723 , 197724 DAS 40
- ✓ 2 AFT CROSSTUBES , P/N: D206-667-201 , J/S: 197725 , 197726 9-89

Action Taken:						Date:	Initial/Stamp:
LPI C/O IAW ASTM E-1417M-16 NO CRACK FOUND PEN. ZL-56, MPO13600, CLEANER SKC-S MPO13923 , DEV. MPO11715 , UV LIGHT M-20142						AUG 13 2019	 
Description	Location	P/N	Qty	Batch	S/N Off	S/N On	

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature: 	ACA/SCA Stamp 	Date: AUG 13 2019
Name: RAFIK MELIKIAN		

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS: IIN-D206-667 REV. D

REF. CANADIAN STC: SH01-5
 REF. FAA STC: SR01304NY
 REF. EASA STC: EASA.IM.R.S.01179
 REF. JCAB: STC-32-OSA
 REF. ANAC STC: 2009S08-16, 2009S08-17

REF

THE FOLLOWING D206-667-101/-103/-107/-203/-207 AND D407-667-105/-205 CROSSTUBES HAVE EXTRA HOLES DRILLED ON THE AFT SIDE OF THE CUFFS. THIS HOLE IS NOT REQUIRED FOR INSTALLATION OF DART CROSSTUBES ONTO BHT/AAI SKIDTUBES AS SHOWN IN FIGURE 1.

CUSTOMERS RECEIVING CROSSTUBES AT CHG 002 PRIOR TO 2006/08/08 SHOULD CONTACT DART FOR DISPOSITION IF INSTALLING THE DART CROSSTUBES ONTO BHT/AAI SKIDTUBES PER IIN-D206-667 REV. D.

CUSTOMERS RECEIVING CROSSTUBES AT CHG 002 PRIOR TO 2006/08/08 TO BE INSTALLED WITH DART SKIDTUBES MAY FIND THAT THE SUPPORTS HAVE BEEN INSTALLED BACKWARDS. THE SUPPORTS SHOULD BE REMOVED AND RE-INSTALLED PER ICA-D206-667.

PART NUMBER	CHANGE NUMBER	BATCH / SERIAL NUMBER
D206-667-101	002	B24244, B28679, B29261
D206-667-103	002	B26702, B26704, B27980, B25606, B25605, B23220, B23219, B23218, B23217, B28682, B28683, B32644, B34139, B36053, B66344
D206-667-103	004	B69577, B69578
D206-667-107	002	B78466
D206-667-107BL	003	B90966, B107472
D206-667-203	002	B27492, B27491, B27981, B25609, B25608, B25006, B24646, B34144, B36059
D206-667-203	003	B39852, B51939, B51940, B66405, B68806, B68807
D206-667-203	004	S198486
D206-667-207	002	B81796
D407-667-105	002	B31553
D407-667-105	003	B39271, B56799
D407-667-205	007	B69959
D407-667-205	008	B82113, B108704



CANADA
 DEPARTMENT OF TRANSPORT
 AIRCRAFT CERTIFICATION
 BRANCH
 DAO # 01-Q-01

APPROVED

BY: *C. Provencal*
 C. PROVENCAL (DE # 03)

DATE: 19.09.03
 CERT. NO.: SH01-5
 ISSUE NO.: 3

S	ADD -203 S/N S198486	CP	19.09.03
R	ADD -107BL B/N 107472, -205 B/N B108704	CP	13.11.08
Q	ADD -107BL B/N B90966	CP	12.10.24
P	ADD -203 B/N B68806/B68807, -103 B/N B69577/B69578, -205 B/N B82113, -207 B/N B81796	CP	12.05.07
N	ADD D206-667-107 B/N 78466	CP	12.02.16
REV.	DESCRIPTION	BY	DATE
DESIGN	PH ZF N/A NO CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	19.09.03		
		REV. S SHEET 1 OF 2 SCALE NTS	
TITLE DEVIATION ON D206-667 & D407-667			
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REF

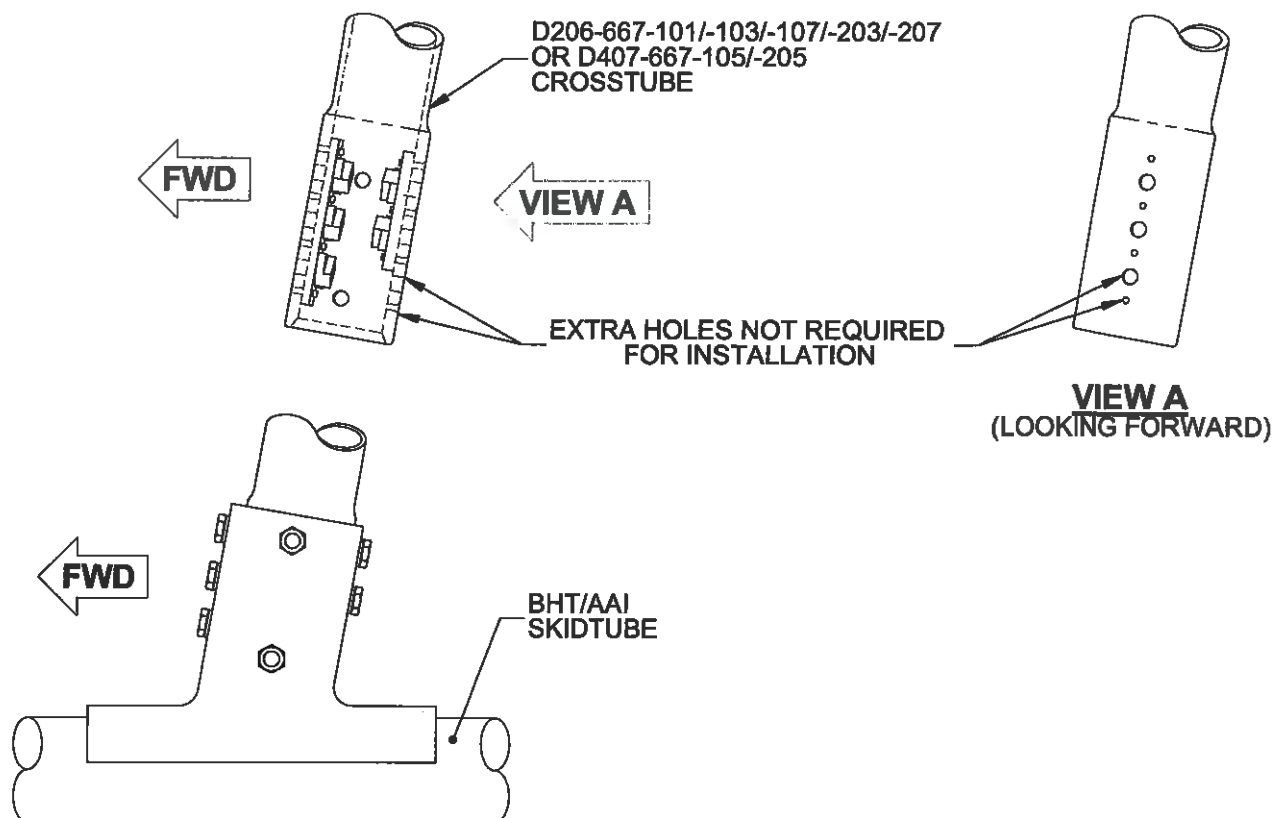


FIGURE 1 - INSTALLATION OF DART CROSSTUBES ON BHT/AAI SKIDTUBE

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *C. Provencal*
C. PROVENCAL (DE # 03)

DATE: 19.09.03
CERT. NO.: SH01-5
ISSUE NO.: 3

DESIGN	<i>PH</i>	DART AEROSPACE LTD	
DRAWN	<i>CP</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ZF	DRAWING NO.	REV. S
MFG. APPR.	N/A	DSI 9346	SHEET 2 OF 2
APPROVED	NO	TITLE	SCALE
DE APPR.	CP <i>CP</i>	DEVIATION ON D206-667 & D407-667	NTS
DATE	19.09.03	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	